Remarks

This response is considered fully responsive to the Office Action mailed July 25, 2008. Claims 1-21 were pending in the application. Claims 1-21 stand rejected. In this Response, no claims have been amended, cancelled, or added. Claims 1-21 are now pending in the application. Reexamination and reconsideration are requested.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-17

Claims 1-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,560,748 to Li ("Li") in view of U.S. Patent Application Publication No. 2002/0108090 by Ariel, et al. ("Ariel"). All rejections are respectfully traversed.

Independent claim 1 recites, *inter alia*, partitioning the input data sequence into a plurality of sections. Independent claim 10 recites, *inter alia*, that the buffer receives the input data sequence and partitions the input data sequence into a plurality of sections. In the rejection of claims 1-17 at pages 4-5 of the Office Action, the Office fails to address partitioning of the input data sequence. However, at page 2 of the Office Action in Response to Applicant's Argument, the Office asserts that "although Li omit to use the word partitioning of the data sequence into plurality of sections, it is clear from the above operation [described at col. 5, lines 41-62 of Li] that the data source u is partitioned and provided straight to the multiplexer (104), to the encoding unit (101) then to the multiplexer (104) and to the plurality of interleavers (103-1 to 103-m) and then to the multiplexer (104) and each interleaver is provided a partial source of data from the source data u. In another way the source data is partitioned." Applicant, however, respectfully disagrees with this characterization of Li, as Li fails to disclose or suggest partitioning of the input data sequence.

Li at col. 5, lines 41-62, states:

> FIG. 7 shows the operation of a plurality of interleavers. In this example, two interleavers are connected in parallel.

> The source data u is provided for each interleaver. Each interleaver changes the order of the data elements forming the source data u according to the predetermined algorithm. The algorithms performed by respective interleavers are different from one another. In the above mentioned operations, different data sequences are generated by the interleavers.

A multiplexing unit 104 multiplexes the output of the interleavers 103-1 through 103-m. That is, the multiplexing unit 104 sequentially multiplexes the data sequence u1 through data sequence um, which are the outputs of the interleavers 103-1 through 103-m, as shown in FIG. 8A. The data length of each of the data sequence u1 through data sequence um is "N" bits. Therefore, when the output of the interleavers 103-1 through 103-m is provided for the multiplexing unit 104, the data length of the output sequence from the multiplexing unit 104 is "mxN" bits. The data sequence output from the multiplexing unit is hereinafter referred to as "data sequence v."

In the cited passage, Li provides no disclosure or suggestion of partitioning the input data. Rather Li at col. 5, line 44, explicitly states that the source data u is provided, in its entirety, to each of the interleavers. Thus, the source data u is not partitioned. Instead, each interleaver outputs the entirety of the input source data u in a different order from the input order. Thus, for each interleaver, there is output a "reordered" copy of the entirety of the input data u. Figures 6, 7, 9, 10, 11, and 15A of Li illustrate that the input or source data u is provided, in its entirety, to each of the interleavers. In other words, Li explicitly teaches that the same source data is randomized by multiple interleavers, thus each interleaver/de-interleaver discussed in Li operates on the same, complete source data u during the encoding/decoding process. Li fails to disclose or suggest that the input data u is partitioned at any point during any of the processes described by Li.

Ariel is relied upon only to teach that different message lengths or different types of interleavers can be used to vary a particular message strength and, thus, does not cure the deficiencies of Li discussed above. Accordingly, Li and Ariel, whether taken alone or in combination, fail to disclose or suggest all of the features of independent claims 1 and 10, and those claims depending directly or indirectly therefrom. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claims 1-17. Allowance of these claims is respectfully requested.

Claims 18-21

Claims 18-21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Li in view of Ariel. All rejections are respectfully traversed.

Independent claim 18 recites, *inter alia*, determining a subset of interleavers, to be used in generating the permuted data sequence. At page 9 of the Office Action, the Office

acknowledges that Li fails to disclose or suggest determining a subset of interleavers, from a plurality of interleavers, to be used in generating the permuted data sequence. Ariel is relied upon to teach this feature. Ariel, however, is silent regarding the determination of a subset of interleavers, from a plurality of interleavers, to be used in generating the permuted data sequence as recited in independent claim 18. Instead, Ariel merely discloses that interleavers having variable properties may be combined. There is no disclosure or suggestion of selecting a subset or combination of interleavers from a plurality of interleavers. Accordingly, Li and Ariel, whether taken alone or in combination, fail to disclose or suggest all of the features of independent claim 18, and those claims depending therefrom. Accordingly, Applicant requests reconsideration and withdrawal of the rejection of claims 18-21. Allowance of these claims is respectfully requested.

Applicant notes that that Office has failed to address any of dependent claims 19, 20, and 21, each of which depend directly from independent claim 18. Applicant notes that neither Li nor Ariel, whether taken alone or in combination, disclose or suggest "wherein determining the subset of interleavers includes determining the subset of interleavers based on header information received with the data sequence" as recited in claim 19, "wherein determining the subset of interleavers includes determining the subset of interleavers based on a mapping table that maps types of data sequences or sources of data sequences to a subset of interleavers" as recited in independent claim 20, or "wherein the subset of interleavers includes at least two interleavers that are of a different type from one another." Accordingly, Applicant respectfully requests the withdrawal of the rejection of claims 19-21. Allowance of claims 19-21 is respectfully requested.

Further, as the Office has not yet addressed claims 19-21, Applicant notes that the next Office Action cannot properly be made final.

Conclusion

Claims 1-21 are currently pending in the application. Applicant has fully responded to each and every objection and rejection in the Office action dated July 25, 2008 and believes that claims 1-21 are in a condition for allowance. Applicant therefore requests that a timely Notice of Allowance be issued in this case.

The Applicant believes no other fees or petitions are due with this filing. However, should any such fees or petitions be required, please consider this a request therefor and authorization to charge Deposit Account No. 50-3199 as necessary.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney. If the Examiner believes any issues could be resolved via a telephone interview, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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